

Notice of Allowability

Application No.

10/037,772

Examiner

Dr. Kailash C. Srivastava

Applicant(s)

STOUT ET AL.

Art Unit

1655

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 27 December 2005.
2. ☒ The allowed claim(s) is/are 1,3,4,6-9 and 22-24.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some* c) ☐ None of the:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☒ Interview Summary (PTO-413), Paper No./Mail Date 03/15/2006.
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____.

Examiner's Amendment/Comments

1. Applicants' response filed 27 December 2005 to Office Action mailed 27 July 2005 is acknowledged and entered.

CLAIMS STATUS

2. Claims 2, 5, 10-11, 13, 16, 21 and 25-51 stand canceled.
3. Claims 1, 3, 12, 14-15, 17-20 and 22-24 have been amended.
4. Claims 1, 3-4, 6-9, 12, 14-15, 17-20 and 22-24 are pending and are examined on merits.

Examiner's Amendment

5. An Examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicants, an amendment may be filed as provided by 37 CFR §1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.
6. Authorization for this Examiner's amendment was given in a telephone interview with Mr. Tracey Truitt on 15 March 2006.

In the Claims:

- The following listing of claims will replace all prior versions, and listings, of claims in this application:

1. (Currently Amended) A method of determining the presence of an active angiotensin converting enzyme (ACE) - inhibiting drug present in a fluid sample, said ACE-inhibiting drug in its active state ~~capable of~~ modifying the activity level of ~~an enzyme~~ ACE on a ~~selected~~ substrate, wherein said substrate is specific for ACE, said method comprising the steps of:

providing a first fluid sample obtained from a patient that may ~~or may not~~ contain any of said ACE-inhibiting drug, said first fluid sample being a serum or urine sample and including ~~said enzyme~~ ACE;

adding a quantity of said ~~selected~~ substrate to said first fluid sample;

measuring the activity level of ~~said enzyme~~ ACE on said ~~selected~~ substrate;

comparing said measured activity level with a standard activity level established by testing serum or urine samples from a plurality of individuals other than the patient that have a known quantity of active ACE-inhibiting drug present; and

determining the presence of said active ACE-inhibiting drug by said the measured activity level compared to said standard activity level.

2. (Cancel).
3. (Currently Amended) The method of claim 1, said standard activity level representing the activity level of said enzyme on a known quantity of said ~~selected~~ substrate.
4. (Previously Presented) The method of claim 1 further comprising the step of correlating said measured activity level with the concentration of said active ACE-inhibiting drug.
5. (Cancel).
6. (Currently Amended) The method of claim ~~[[5]]~~ 1, said standard activity level representing the activity level of said ~~enzyme~~ ACE on a known quantity of said ~~selected~~ substrate.
7. (Currently Amended) The method of claim 1, said ACE ~~enzyme~~ activity level decreasing when said active ACE-inhibiting drug is present.
8. (Currently Amended) The method of claim 1, said ~~enzyme~~ ACE activity level increasing as the level of active ACE-inhibiting drug in said sample decreases.
9. (Currentlly Amended) The method of claim 1, said ~~enzyme~~ ACE activity level decreasing as the level of said active ACE-inhibiting drug in said sample increases.
- 10-21. (Cancel).

22. (Currently Amended) The method of claim 42 1, wherein said ACE-inhibiting drugs ~~being are~~ is selected from the group consisting of benazepril, captopril, enalapril, fosinopril, lisinopril, quinapril, ramipril, and trandolapril and combinations thereof.
23. (Currently Amended) The method of claim 42 1, wherein said determining step comprises ~~including~~ the step of measuring the optical density of said fluid sample.
24. (Currently Amended) The method of claim 42 1, wherein said activity level ~~levels being~~ is correlated with the optical density at 340 nm (O.D.₃₄₀) and is inverse of the delta O.D.₃₄₀ number.

EXAMINER'S STATEMENT OF REASONS FOR ALLOWANCE

7. The following is Examiner's statement of reasons for allowance:

The closest prior art are:

Weinshilbourn et al. (American Journal of Human Genetics, 1980, Volume 32, Pages 651-662);

Alegret et al. (European Journal of Pharmacology, 1998, Volume 347, Pages 283-291);
and

Brunner et al. (U.S. Patent 5,407,803)

Weinshilbourn et al. teach assaying enzyme activity of erythrocyte (i.e., RBC) thiopurine methyltransferase (i.e., TPMT), an enzyme catalyzing thiopurine S methylation, in blood samples taken from 298 different patients.

Alegret et al. teach a method to assay the activity of 3-hydroxy-3-methyl-glutaryl CoA reductase (i.e., HMG CoA reductase) in samples from different groups of rabbits treated with three different ACE-inhibitors and a control. The activity was monitored over a period of 4 weeks in rabbits treated with bezafibrate, atorvastatin and simvastatin.

Brunner et al. compare the measured ACE activity in plasma samples taken before and after ingestion of enalapril and compare those activities with a base line and a standard curve for the ACE activity.

None of the prior art teachings teach measuring the activity of cited enzymes against a standard obtained from blood samples from patients other than the subject whose blood/urine is tested for the presence of ACE inhibitor, not the activity of ACE. Thus, the prior art references, either alone or in combination do not teach or suggest a motivation to combine the teachings from different references a method that is claimed instantly.

8. Any comments considered necessary by applicants must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."


9. Claims 1, 3-4, 6-9 and 22-24 are allowed.

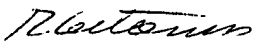
10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Said prior art is: U.S. Patent 5,498,524 issued to Hall on 12 March 1996.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Kailash C. Srivastava whose telephone number is (571) 272-0923. The examiner can normally be reached on Monday to Thursday from 7:30 A.M. to 6:00 P.M. (Eastern Standard or Daylight Savings Time).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dr. Terry McKelvey, can be reached on (571) 272-0775 Monday through Friday, 8:30 A.M. to 5:00 P.M. The fax phone number for the organization where this application or proceeding is assigned is (571)-273-8300.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0196.


Kailash C. Srivastava, Ph.D.
Patent Examiner
Art Unit 1651
(571) 272-0923


RALPH GITOMER
PRIMARY EXAMINER
GROUP 1200

March 16, 2006